IN THE CLAIMS

Please amend claims 1-4 as indicated below.

Please cancel claim 5 without prejudice.

Please add new claims 6-20 as indicated below.

This listing of claims below will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A transgenic non-human animal ~~into which a gene~~ whose genome comprises a nucleotide sequence encoding a trans-synaptic tracer protein ~~is introduced so as to direct specific expression in neurons~~ operably linked to a neuron specific promoter, wherein the trans-synaptic tracer protein is expressed in neurons of interest.

2. (Currently Amended) The transgenic non-human animal according to claim 1, wherein ~~a promoter specific to the particular neurons is located upstream of the gene encoding~~ the trans-synaptic tracer protein is selected from the group consisting of wheat germ agglutinin, Con A, PSA and LCA.

3. (Currently Amended) The transgenic non-human animal according to claim 1, wherein the trans-synaptic tracer protein is wheat germ agglutinin.

4. (Currently Amended) A method for screening for ~~neuromimetic~~ substances having an effect upon cultured neurons, which comprises:

a) creating cultured neurons according to claim 6,

b) administering a test substance to ~~the transgenic animal according to claim 1~~ a first group of the cultured neurons;

c) determining the expression level of the trans-synaptic tracer protein in the first group of cultured neurons;

d) determining the expression level of the trans-synaptic tracer protein in a second group of the cultured neurons as a control; and

~~selecting a neuromimetic substance from among the test substances by using as an indicator the trans-synaptic protein expressed in neurons of the non-human transgenic animal~~

e) comparing the expression level of the trans-synaptic tracer protein in the first group of cultured neurons to the expression level of the trans-synaptic protein in the second group of cultured neurons;

wherein a measurable difference in expression provides an indication of the effect of the test substance.

5. (Canceled)

6. (New) A cultured neuron expressing a trans-synaptic tracer protein established from the transgenic non-human animal according to claim 1, said cultured neuron being derived from a body tissue of said transgenic animal expressing said trans-synaptic tracer protein.

7. (New) The method according to claim 4, wherein the effect of the test substance is an effect chosen from among the group consisting of effect upon cell survival and maintenance, dendrite extension, synapse formation, enzymatic activity and neurotransmitter production.

8. (New) The transgenic non-human animal according to claim 1, wherein the transgenic animal is a mammal.

9. (New) The transgenic non-human animal according to claim 1, wherein the transgenic animal is a rodent.

10. (New) The transgenic non-human animal according to claim 1, wherein the transgenic animal is a mouse.

11. (New) The transgenic non-human animal according to claim 1, wherein the neuron specific promoter is a cerebellar Purkinje cell-specific promoter or olfactory receptor cell-specific promoter.

12. (New) The transgenic non-human animal according to claim 11, wherein the neuron specific promoter is a cerebellar Purkinje cell-specific L7 promoter or olfactory receptor cell-specific OMP promoter.

13. (New) A non-human animal model obtained by crossing a transgenic non-human animal according to claim 1 with a non-human animal model for diseases resulting from abnormal neural pathways or with a spontaneously mutated animal model.

14. (New) The non-human animal model according to claim 13, wherein the trans-synaptic tracer protein is selected from the group consisting of wheat germ agglutinin, ConA, PSA and LCA.

15. (New) The non-human animal model according to claim 13, wherein the trans-synaptic tracer protein is wheat germ agglutinin.

16. (New) The non-human animal model according to claim 13, wherein the neuron specific promoter is cerebellar Purkinje cell-specific promoter or olfactory receptor cell-specific promoter.

17. (New) The non-human animal model according to claim 16, wherein the neuron specific promoter is cerebellar Purkinje cell-specific L7 promoter or olfactory receptor cell-specific OMP promoter.

18. (New) A method for screening substances, which comprises:

(a) creating a transgenic non-human animal model according to claim 13, wherein said animal has a pathological condition in neural pathways;

(b) administering a test substance to the animal;

(c) determining if the neurological pathways are restored; and

(d) selecting from among the test substances a substance that exhibits the ability to restore the pathological conditions in neural pathways in step (c) or to form compensatory pathways by using as an indicator a trans-synaptic tracer protein expressed in neurons of the animal.

19. (New) The method according to claim 18, wherein the trans-synaptic tracer protein used to obtain said animal model is wheat germ agglutinin.

20. (New) The method according to claim 18, wherein the neuron specific promoter used to obtain said animal model is cerebellar Purkinje cell-specific L7 promoter or olfactory receptor cell-specific OMP promoter.